WHAT IS CLAIMED IS:

1. A complex semiconductor device with the feature that, in said complex semiconductor device having a second semiconductor region of second conductivity type exposed on a second main surface on a first semiconductor region of a first conductivity type, a third semiconductor region of the first conductivity type and a fourth semiconductor region of the first conductivity type provided inside said second semiconductor region so as to be exposed on said second main surface, a fifth semiconductor region of the second conductivity type provided inside said third semiconductor region so as to be exposed to said second main surface, a sixth semiconductor region of the second conductivity type provided inside said fourth semiconductor region so as to be exposed on the surface of said second main surface, a first insulated gate formed on said second main surface so as to extend over said fifth semiconductor region and said sixth semiconductor region, a first electrode in low-resistance contact with said first semiconductor region on said first main surface, and a second electrode on said second main surface short-circuiting said third semiconductor region and saId fifth semiconductor region, said fourth semiconductor region and said second electrode are connected together by a nonlinear element.

2. A complex semiconductor device according to Claim 1 above with the feature that said nonlinear element goes into the ON state by applying a voltage between said first electrode and said second electrode that is more than the voltage when said complex semiconductor device is conducting its rated current.

3. A complex semiconductor device according to Claim 2 above with the feature that a Zener diode is used as said nonlinear element with its anode being connected to said second electrode.

4. A complex semiconductor device according to Claim 2 above with the feature that a field effect transistor with its gate electrode connected to said second electrode is used as said nonlinear element.

5. A complex semiconductor device with the feature that, in said complex semiconductor device having a second semiconductor region of second conductivity type exposed on a second main surface on a first semiconductor region of a first conductivity type, a third semiconductor region of the first conductivity type provided inside said second semiconductor region so as to be exposed on said second main surface, a fourth semiconductor region and a fifth semiconductor region of the second conductivity type provided inside said third semiconductor region so as to be exposed to said second main

surface, a first insulated gate formed on said second main surface so as to extend over said fourth semiconductor region and said fifth semiconductor region, a second insulated gate formed so as to extend over said fifth semiconductor region and said second semiconductor region, a first electrode in low-resistance contact with said first semiconductor region on said first main surface, and a second electrode on said second main surface short-circuiting said third semiconductor region and said fourth semiconductor region, said fourth semiconductor region and said second electrode are connected together by a nonlinear element.

6. A complex semiconductor device with the feature that, in said complex semiconductor device having a second semiconductor region of second conductivity type exposed on a second main surface on a first semiconductor region of a first conductivity type, a third semiconductor region of the first conductivity type provided inside said second semiconductor region so as to be exposed on said second main surface, a fourth semiconductor region of the second conductivity type provided inside said third semiconductor region so as to be exposed to said second main surface, a first insulated gate formed on said second main surface so as to extend over said fourth semiconductor region and said second semiconductor region, a first electrode in low-resistance contact with said first semiconductor region on said first main surface, and a

second electrode on said second main surface short- circuiting said third semiconductor region and said fourth semiconductor region, said fourth semiconductor region and said second electrode are connected together by a nonlinear element.

7. An electrical power conversion apparatus with the feature that it employs a complex semiconductor device according to claim 1.

8. An electrical power conversion apparatus with the feature that it employs a complex semiconductor device according to claim 2.

9. An electrical power conversion apparatus with the feature that it employs a complex semiconductor device according to claim 3.

10. An electrical power conversion apparatus with the feature that it employs a complex semiconductor device according to claim 4.

11. An electrical power conversion apparatus with the feature that it employs a complex semiconductor device according to claim 5.

12. An electrical power conversion apparatus with the feature that it employs a complex semiconductor device according to claim 6.